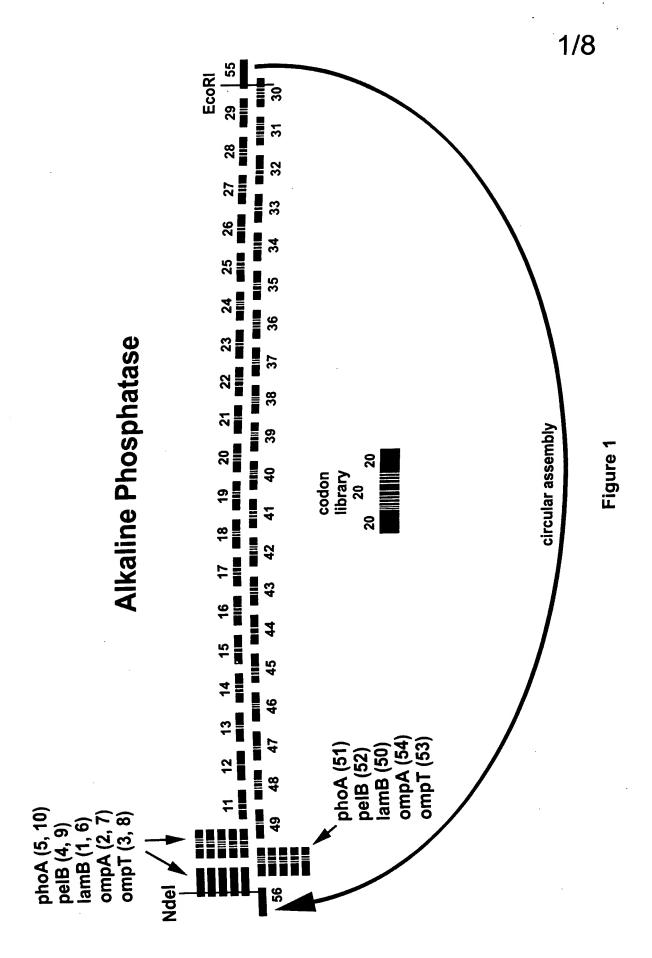
METHODS AND COMPOSITIONS FOR POLE TIDE ENGINEERING Phillip M. Patten, et al. Serial No.: 09/954,692 Attorney Docket No.: 02-020522US



THODS AND COMPOSITIONS FOR YPEPTIDE ENGINEERING Phillip A. Patten, et al.

Serial No.: 09/954,692

Attorney Docket No.: 02-020522US

Interferon Figures Protein sequences of interferon alphas to be shuffled C D L P Q T H S L G N R R A L I L L A Q M G R I S P F S C L 1.Consensus * * * 10 20 2. alpha I 3. alpha C 4. alpha H 5. alpha 4B - - H -TMM 6. alpha 6 - R 7. alpha 7 8. alpha 8 T - M -- S 9. alpha D 10.alpha F 11.alpha I - -- -12.alpha WA KDRHDFGFPQEEFDGNQFQKAQAISVLHEM 1.Consensus 60 50 40 - T 2. alpha I 3. alpha C - B -4. alpha H H E 5. alpha 4B - -E - R -6. alpha 6 - -- D T - B - R -- -H 7. alpha 7 K - E -8. alpha 8 - L 9. alpha D 10.alpha F T - L -11.alpha I P **v** -12.alpha WA IQQTFNLFSTKDSSAAWEQSLLEKFSTELY 1.Consensus 80 70 - - - E - -- - E - -2. alpha I _ _ - - -3. alpha C - - D E T -- N - -4. alpha H - E 5. alpha 4B - - D B R - - D v 6. alpha 6 7. alpha 7 - D B -- L D B T -8. alpha 8 - D - DED T 9. alpha D T 10.alpha F _ E _ 11.alpha I --DET--D--YI--F 12.alpha WA QQLNDLEACVIQEVGVEETPLMNEDSILAV 1.Consensus * * 120 100 - M -2. alpha I - M 3. alpha C 4. alpha H 5. alpha 4B W - G G - M -6. alpha 6 7. alpha 7 S I - - M -- S 8. alpha 8 - - - - -- - M -- - N - -- E R - G 9. alpha D V _ _ _ _ -10.alpha F - - - M - -

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11.alpha I

12.alpha WA

METHODS AND COMPOSITIONS FOR OLYPEPTIDE ENGINEERING

Phillip A. Patten, et al. Serial No.: 09/954,692

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METHODS AND COMPOSITIONS FOR LYPEPTIDE ENGINEERING Phillip A. Patten, et al. Serial No.: 09/954,692

Serial No.: 09/954,692 Attorney Docket No.: 02-020522US

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METHODS AND COMPOSITIONS FOR OLYPEPTIDE ENGINEERING Phillip A. Patten, et al. Serial No.: 09/954,692 Attorney Docket No.: 02-020522US

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ETHODS AND COMPOSITIONS FOR LYPEPTIDE ENGINEERING

Phillip A. Patten, et al. Serial No.: 09/954,692 Attorney Docket No.: 02-020522US

1.Consensus	A	G	A	T	T	A	A	G	G	A	G	G	A	A	G	G	A	T	T	G	A	SEQ	ID	NO:	87
								190)					500)										
2. alpha I	_	_	-	_	_	_	_	_		_	_	_	-	-	_	-	_	-	-	-	-	SEQ	ID	NO:	88
3. alpha C	_	т	_	_	_	_	_	_	_	_	_	_	_	-	_	_	_	-	-	-	-	SEQ	ID	NO:	89
4. alpha H	_	_	_	-	_	_	_	_	_	_	_	_		_	_	-	_	_	_	-	-	SEQ	ID	NO:	90
5. alpha 4B			_																			SEQ	ID	NO:	91
6. alpha 6	_	_	G	_	_	_	-	_	_	_		_	0	_	_	_	_	Α	_	A	_	SEQ	ID	NO:	92
7. alpha 7			_																			SEQ	ID	NO:	93
8. alpha 8																						SEO	ID	NO:	94
9. alpha D																						SEO	ID	NO:	95
10.alpha F	_	_	_	_	_	-	-	_	_	_	_	_	-	_	_	_	_	Α	_	-	_	SEO	ID	NO:	96
11.alpha I	_	_	_	_		_	_	_	-	_	_	_	_	-	_	_	-	_	-	_	_	SEO	ID	NO:	97
12.alpha WA	G	_	_	_	-	_	-	-	A	-	-	-	-	-	-	-	-	-	-	-	-	SEQ	ID	NO:	98